



Thornton High School
 9351 North Washington • Thornton, CO 80229
 Office: (720) 972-4800 • Fax: (720) 972-4999
<http://www.thorntonh.adams12.org>



School Year	2017-2018	Teacher Name	Peter Chapman
Office	Room 526	Website	https://sites.google.com/view/petersmathpages/home
Phone	720-972-4904	Office Hours	Students can see me for help/questions 4 th period (with note from teacher), at lunch, before or after school.
Email Address	peter.chapman@adams12.org		

Course Name		Math Analysis – 2125 Credit: 1 Level: 1 Grades: 11,12		
Course Description		Math Analysis courses include the study of polynomial, logarithmic, exponential, and rational functions and their graphs; vectors; set theory; Boolean algebra and symbolic logic; mathematical induction; matrix algebra; sequences and series; and limits and continuity. They may also include some study of trigonometry and/or pre-calculus topics. Elementary Functions courses, while preparing students for eventual work in calculus, include the study of relations and functions, including polynomial, logarithmic, exponential, rational, right trigonometric, and circular functions, and their inverses, graphs, and applications.		
Unit of Study	Grade Level Expectations/Content Standards	Approximate Time Spent or Percent of time Spent	Targeted Date of Assessment	
Algebra (Notation and Equations)	Students will be able to use and apply the following: algebraic notation, algebraic substitution, linear equations, rational equations, linear inequalities, problem solving, money and investment problems, motion problems, and mixture problems	@ 15 days or 4 weeks	September 18	
Algebraic Expansion And Factorization	Students will be able to use and apply the following: revision of expansion laws, revision of factorization, further expansion, binomial expansion, factorizing expressions with four terms, factorizing quadratic trinomials, factorization by splitting, miscellaneous factorization	@ 12 days or 3 weeks	October 9	
Radicals and Surds	Students will be able to use and apply the following: basic operations with radicals, properties of radicals, multiplication of radicals, division by radicals, equality of surds	@ 8 days or 2 week	October 16	
Quadratic Equations	Students will be able to use and apply the following: quadratic equations of the form $x^2 = k$, solutions by factorization, completing the square, problem solving, quadratic formula	@ 15 days or 3 weeks	November 6	
Algebraic Fractions	Students will be able to use and apply the following: solving algebraic fractions (quadratics), simplifying algebraic fractions, multiplying and dividing algebraic fractions, adding and subtracting fractions, more complicated fractions	@ 9 days or 2 weeks	November 20	
Counting & Probability	Students will be able to set up & compute factorials; apply & calculate permutations; apply & calculate combinations; solve applications involving permutations & combinations	@ 13 days or 4 weeks	December 11	
Pythagorean's Theorem	Students will be able to use right triangle trigonometry to solve for missing sides & angles; use similar figures to find missing sides & angles; calculate the slope, distance & midpoints between two points; use triangle & parallel & perpendicular line properties to find missing angles	@9 days or 2 weeks	January 15	
Coordinate Geometry	Students will be able to calculate the distance between two points; midpoints; gradient (slope); using coordinate geometry; equations of straight lines; distance from a point to a line; 3-D coordinate geometry	@14 days or 3 weeks	February 5	
Trigonometry	Students will be able to write and solve trigonometric ratios; trigonometric problem solving; 3-D problem solving; the unit circle; area of a triangle using sine; apply the sine & cosine rules to problem solving; trigonometric identities	@14 days or 3 weeks	March 11	
Relations, Functions & Sequences	Students will be able to identify relations and functions; function notation; composite functions; inverse functions; where functions meet; number sequences; recurrence relationships	@20 days or 4 weeks	April 15	



Exponential Functions & Logarithms	Students will be able to apply index laws; rational (fractional) indices; recognize, graph & use the graph of an exponential equation to make predictions & to model growth & decay; compound interest; depreciation	@15 days or 3 weeks	May 6
Grading Scale		Grade Percentages/Weights	
A	90-100	Summative Assessments & Projects	80%
B	80-89	Formative Assessments & Projects	20%
C	70-79		
D	60-69	*Weekly progress grades are posted at https://ic.adams12.org/campus/portal/adams12.isp	
F	59 or below		

On group projects, students will receive a grade for individual work and a group grade

Individual Grade	80%
Group Grade	20%

Grades are based on achievement of Content Standards and Grade Level Expectations.

Class Expectations

Missing or incomplete assignments/assessments for this course: Superintendent Policies 6280 Homework and 6281 Make-Up Work, will be followed for this course.

- First and second semester final exams **ARE NOT** eligible for retake.
- A student is allowed to retake any summative assessment up to 10 (school) days after the original summative assessment has been graded and communicated to the student. After the 10 days, the eligibility for retake will expire unless prior arrangements have been made with the teacher.
- All retakes will be for full credit.
- On the first retake, the student does not need to provide evidence of learning. Any subsequent retake during the 10-day period will require a body of evidence of learning as determined by the teacher. The teacher must allow a reasonable period of time for student completion of the body of evidence.
- No homework, but you will be expected to have classwork completed for the next day.

Student Expectations

The following expectations/policies describe what we expect from you. These expectations should be followed in all classes in the house.

Attending Skills

- We will focus on the following attending skills
 - 1. BEING IN THE MOMENT**
 - 2. APPROPRIATE BODY LANGUAGE**
 - 3. APPROPRIATE EYE CONTACT**
 - 4. APPROPRIATE FEEDBACK**
 - 5. QUESTIONS TO CLARIFY OR VALIDATE**

The 6 "P's" of the Discovery Model

- The 6 P's should guide student behaviors and interactions
 - 1. Prompt**
 - 2. Prepared**
 - 3. Polite**
 - 4. Positive Mental Attitude**
 - 5. Participate**
 - 6. Produce**

General Expectations

- Grades are based upon the demonstration of proficiency on units associated with a standard given during each formative or summative assessment. Formative grades in addition to summative unit assessments will be used to holistically determine your grade.
- **Summative: 80%** Summative measures of achievement are taken when unit master is expected. (i.e., unit tests, culmination of a project, embedded assessments, etc.)
- **Formative: 20%** Formative assessments measure the scaffolding skills and/or content embedded in the unit. Formative assessments are taken frequently, after a student has practiced a skill or become familiar with content. Examples of formative assessments include but are not limited to exit tickets, paragraphs, oral check for understanding, warm-ups, stages in a large project, etc.
- Assessments will be graded based on teacher/district/state rubrics.